

Title (en)

SYSTEM FOR ON-LINE ASSESSMENT OF THE CONDITION OF A THERMAL COATING ON A TURBINE VANE

Title (de)

SYSTEM ZUR ONLINE-BEWERTUNG DES ZUSTANDES EINER THERMISCHEN BESCHICHTUNG AUF EINER TURBINENSCHAUFEL

Title (fr)

SYSTEME D'EVALUATION EN LIGNE DE L'ETAT D'UN REVETEMENT THERMIQUE SITUE SUR UNE AUBE DE TURBINE

Publication

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Application

EP 05858316 A 20051114

Priority

- US 2005040955 W 20051114
- US 1877104 A 20041220

Abstract (en)

[origin: US2006132149A1] Aspects of the invention relate to a system for assessing the condition of a thermal barrier coating on a turbine vane during engine operation. According to embodiments of the invention, one or more wires can be passed along the airfoil portion of the vane. The wires can extend over, within, or beneath the thermal coating. An electrical current can be passed along the wires, and electrical resistance can be measured across the wires. Thus, if a portion of the thermal coating becomes damaged, then the wires located in that area may break. A disconnect in the wires can lead to an increase in resistance across the wires, which can alert an operator to a problem. Some assessment systems can provide a general indication of the magnitude of damage and whether the damage is spreading.

IPC 8 full level

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